

## CONTENTS

### Number 1

- |   |   |
|---|---|
| <b>R. D. Harding, S. W. Lay,<br/>H. Moule and D. A. Quinney</b> | <b>1</b> Multimedia interactive mathematics courseware:<br>the mathematics experience within the<br>Renaissance Project |
| <b>Ian Moffatt and Jon Greenman</b>                             | <b>25</b> The use of computing in Scottish schools: a<br>preliminary survey   |
| <b>M. C. Er</b>   | <b>31</b> Process frame: a cognitive device for recursion<br>comprehension  |
| <b>Susan Wiedenbeck and<br/>Jean Scholtz</b>                    | <b>37</b> Introducing undergraduates to research: a case<br>study from the field of human-computer<br>interaction       |
| <b>A. Alberto Silva</b>   | <b>51</b> Energy in electrical circuits: a computer assisted<br>approach  |
| <b>Kazuyoshi Hidaka</b>   | <b>59</b> User-interface of a tool for learning geometry  |
| <b>Software Review</b>  | <b>67</b>   |
| <b>Book Reviews</b>   | <b>69</b>   |

### Number 2

- |  |  |
|--|--|
| <b>S. Ian Robertson, Judith Calder,<br/>Pat Fung, Ann Jones and<br/>Tim O'Shea</b>               | <b>73</b> Computer attitudes in an English secondary<br>school           |
| <b>Justin Watkins, John Davies,<br/>Gayle Calverley and<br/>Tony Cartwright</b>                  | <b>83</b> Evaluation of a physics multimedia resource                    |
| <b>Johan P. Du Plessis,<br/>Judy A. Van Biljon,<br/>C. Janse Tolmie and<br/>Thomas Wollinger</b> | <b>89</b> A model for intelligent computer-aided<br>education systems    |
| <b>J. Anthony Seikel,<br/>David G. Drumright,<br/>Margery M. Whites and<br/>Paula J. Seikel</b>  | <b>107</b> A "hands-on" approach to speech science                       |
| <b>Irina Zheliazkova</b>   | <b>117</b> An intelligent system for teaching and learning<br>algorithms |

|   |            |   |
|---|------------|---|
| <b>R. D. Harding, S. W. Lay,<br/>H. Moule and D. A. Quinney</b> | <b>127</b> | <b>A mathematical toolkit for interactive hypertext<br/>courseware: part of the mathematics experience<br/>within the Renaissance Project</b> |
| <b>Book Reviews</b>   | <b>137</b> |   |
| <b>Announcement</b>   | <b>I</b>   |   |

### **Number 3**

## **EDUCATION AND THE INTERNET**

|  |          |                |
|--|----------|----------------|
| <b>Wendy A. Kellogg<br/>and Dennis W. Viehland</b> | <b>v</b> | <b>Preface</b> |
|--|----------|----------------|

### **DISTANCE LEARNING VIA THE INTERNET**

|  |            |  |
|--|------------|--|
| <b>Kazuo Watabe,<br/>Matti Hamalainen<br/>and Andrew B. Whinston</b> | <b>141</b> | <b>An Internet based Collaborative Distance<br/>Learning System: CODILESS</b>          |
| <b>David G. Novick<br/>and Stephen Fickas</b>                        | <b>157</b> | <b>Collaborative networked hypermedia education:<br/>lessons from the NERO project</b> |

### **ENHANCING CURRICULUM WITH THE INTERNET**

|  |            |   |
|--|------------|---|
| <b>James Ambach, Corrina Perrone<br/>and Alexander Repenning</b> | <b>163</b> | <b>Remote exploratoriums: combining network<br/>media and design environments</b> |
| <b>Patricia S. Kuntz</b>   | <b>177</b> | <b>Swahili-L: the Internet promotes literacy</b>                                  |

### **SCHOLARLY COMMUNITIES ON THE INTERNET**

|   |            |  |
|---|------------|--|
| <b>Zane L. Berge and Mauri Collins</b>  | <b>183</b> | <b>Computer-mediated scholarly discussion groups</b>   |
| <b>Eric D. Friedman, Lisa Haefele,<br/>K. M. Keating, Mark Mullen,<br/>Mark Patrick, David Plotkin<br/>and Ellen Strenski</b> | <b>191</b> | <b>An electronic discussion list in an undergraduate<br/>writing course</b>                                |
| <b>Ann D. Yakimovicz<br/>and Karen L. Murphy</b>  | <b>203</b> | <b>Constructivism and collaboration on the<br/>Internet: case study of a graduate class<br/>experience</b> |

### **THE INTERNET FROM A K-12 PERSPECTIVE**

|   |            |   |
|---|------------|---|
| <b>Rebecca Eurich-Fulcer<br/>and Janet Ward Schofield</b>                         | <b>211</b> | <b>Wide-area networking in K-12 education: issues<br/>shaping implementation and use</b>                      |
| <b>Lynne Schrum</b>   | <b>221</b> | <b>Educators and the Internet: a case study of<br/>professional development</b>                               |
| <b>Gail Clark Futoran,<br/>Janet Ward Schofield<br/>and Rebecca Eurich-Fulcer</b> | <b>229</b> | <b>The Internet as a K-12 educational resource:<br/>emerging issues of information access and<br/>freedom</b> |

## **SUPPORTING TEACHERS VIA THE INTERNET**

- |   |            |   |
|---|------------|---|
| <b>Gerry Stahl, Tamara Sumner<br/>and Robert Owen</b> | <b>237</b> | Share globally, adapt locally: software assistance to locate and tailor curriculum posted to the Internet |
| <b>William Spitzer<br/>and Kelly Wedding</b>          | <b>247</b> | LabNet: an international electronic community for professional development                                |
| <b>Book Review</b>                                    | <b>257</b> |   |

## **Number 4**

- |  |            |  |
|--|------------|--|
| <b>George Long, Harry Pence<br/>and Theresa Julia Zielinski</b>                  | <b>259</b> | New tools vs old methods: a description of the CHEMCONF '93 discussion |
| <b>Bunny J. Tjaden<br/>and C. Dianne Martin</b>                                  | <b>271</b> | Learning effects of CAI on college students                            |
| <b>D. R. McIntyre, Hao-Che Pu<br/>and Francis G. Wolff</b>                       | <b>279</b> | Use of software tools in teaching relational database design           |
| <b>James A. DuPlass</b>  | <b>287</b> | Teaching software: is the supervised laboratory effective?             |
| <b>Y. F. Chan, H. K. Ma,<br/>F. T. Chan, H. Y. Chen<br/>and T. Y. Chen</b>       | <b>293</b> | Teaching family planning with expert system                            |
| <b>G. A. Mooney, R. T. Edwards,<br/>A. G. Deakin, L. B. Carp<br/>and R. Rada</b> | <b>299</b> | Computer assisted education in health economics for medical advisers   |
| <b>Software Review</b>   | <b>313</b> |  |
| <b>Book Reviews</b>  | <b>317</b> |  |